General

Guideline Title

Screening for colorectal cancer: a guidance statement from the American College of Physicians.

Bibliographic Source(s)

Qaseem A, Denberg TD, Hopkins RH Jr, Humphrey LL, Levine J, Sweet DE, Shekelle P, Clinical Guidelines Committee of the American College of Physicians. Screening for colorectal cancer: a guidance statement from the American College of Physicians. Ann Intern Med. 2012 Mar 6;156(5):378-86. [16 references] PubMed

Guideline Status

This is the current release of the guideline.

Recommendations

Major Recommendations

On the basis of the review of the available guidelines, the American College of Physicians (ACP) concludes:

Guidance Statement 1: ACP recommends that clinicians perform individualized assessment of risk for colorectal cancer in all adults.

Clinicians should perform individualized assessment of colorectal cancer risk in all adults to help in deciding when to begin screening. Risks for colorectal cancer include age, race, and family history (for example, diagnosis of colorectal cancer, hereditary nonpolyposis, or familial adenomatous polyposis). Diagnosis of colorectal cancer in a first-degree relative, especially before age 50 years, increases the probability of colorectal cancer in all adults; a thorough family history, including the age of diagnosis of colorectal cancer for primary and secondary relatives, is important for assessing this risk. African Americans have the highest incidence of colorectal cancer compared with other races.

Guidance Statement 2: ACP recommends that clinicians screen for colorectal cancer in average-risk adults starting at the age of 50 years and in high-risk adults starting at the age of 40 years or 10 years younger than the age at which the youngest affected relative was diagnosed with colorectal cancer.

The evidence in the reviewed guidelines shows that colorectal cancer screening helps to identify undiagnosed premalignant lesions and reduces mortality with the provision of timely treatment. The benefit of reduced mortality outweighs the harms of screening for colorectal cancer in average-risk adults starting at age 50 years and high-risk adults starting at age 40 years or 10 years younger than the age at which the youngest affected relative was diagnosed.

Guidance Statement 3: ACP recommends using a stool-based test, flexible sigmoidoscopy, or optical colonoscopy as a screening test in patients who are at average risk. ACP recommends using optical colonoscopy as a screening test in patients who are at high risk. Clinicians should select the test based on the benefits and harms of the screening test, availability of the screening test, and patient

preferences.

Shared decision making is important when selecting a screening test because the currently available colorectal cancer screening tests are believed to be similarly efficacious. Clinicians should discuss the benefits, harms, effectiveness, safety, and costs of the options available to screen for colorectal cancer. The sensitivity, specificity, costs, benefits, harms, and screening intervals for the tests are described in Table 2 in the original guideline document. The test quality also varies on the basis of the skill of the person performing the test (for example, ensuring correct stool preparation or having an experienced professional perform a colonoscopy), and stool-based test quality can also depend on the samples collected by the patient. Harms of endoscopic and radiologic screening tests include perforation and major bleeding with endoscopic tests and exposure to radiation with radiologic tests. Although few studies have evaluated the harms of stool-based tests, the probability of major harms is probably very small. The choice of test may also need to be made on the basis of the local availability of screening methods. For example, accessibility to endoscopic tests varies by region in the United States.

The screening interval for average-risk adults older than 50 years is 10 years for colonoscopy; 5 years for flexible sigmoidoscopy, double-contrast barium enema (DCBE), and computed tomography colonography (CTC); annually for guaiac-based fecal occult blood test (gFOBT) and immunochemical-based fecal occult blood test (iFOBT); and uncertain for stool DNA (sDNA).

Although optical colonoscopy is generally regarded as the gold standard, it has limitations, including a false-negative rate of 10% to 20%. Also, evidence is not clear on the optimal frequency of screening using colonoscopy, but in average-risk patients, 10 years is usually regarded as a safe interval. Colonoscopy should be used as a follow-up for positive test results regardless of the noncolonoscopic screening test used. In patients who are at high risk because of family history, the American College of Gastroenterology (ACG) recommends screening every 5 years.

Computed tomography colonography is an option for screening in average-risk patients older than 50 years and is supported by some guidelines. However, the U.S. Preventive Services Task Force (USPSTF) found that the evidence is insufficient to assess the benefits and harms of CTC.

Guidance Statement 4: ACP recommends that clinicians stop screening for colorectal cancer in adults over the age of 75 years or in adults with a life expectancy of less than 10 years.

The harms of screening for colorectal cancer seem to outweigh the benefits in most adults older than 75 years or in adults who have a life expectancy of less than 10 years. Therefore, clinicians should not screen adults older than 75 years or those with substantial comorbid conditions (for example, diabetes, cardiopulmonary diseases, and stroke) with a life expectancy of less than 10 years.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Colorectal cancer

Guideline Category

Risk Assessment

Screening

Clinical Specialty

Colon and Rectal Surgery

Family Practice

Gastroenterology

Internal Medicine

Oncology

Preventive Medicine

Radiology

Intended Users

Advanced Practice Nurses

Nurses

Physician Assistants

Physicians

Guideline Objective(s)

To critically review available guidelines to help internists and other clinicians in making decisions about screening for colorectal cancer

Target Population

All men and women

Interventions and Practices Considered

1. Individualized risk assessment for colorectal cancer
2. Ages to initiate and stop screening
3. Screening intervals
4. Screening tests
    - Stool-based tests: guaiac-based fecal occult blood test (gFOBT), immunochemical-based fecal occult blood test (iFOBT), stool DNA panel (sDNA)
    - Endoscopic and radiologic tests: flexible sigmoidoscopy (FS), optical colonoscopy, double-contrast barium enema (DCBE), computed tomography colonography (CTC)

Major Outcomes Considered

- Risk for colorectal cancer
- Morbidity
- Mortality
- Benefits and harms of screening

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

The Clinical Guidelines Committee of the American College of Physicians (ACP) searched the National Guideline Clearinghouse (NGC) to identify all discrete guidelines on screening for colorectal cancer developed in the United States. After reviewing the titles and abstracts of each identified document, the committee excluded articles that simply restated guidelines from other organizations. The NGC included 4 U.S. guidelines on screening for colorectal cancer: the joint guideline developed by the American Cancer Society (ACS), the U.S. Multi-Society Task Force on Colorectal Cancer (USMSTF), and the American College of Radiology (ACR) and individual guidelines developed by the Institute for Clinical Systems Improvement (ICSI), the U.S. Preventive Services Task Force (USPSTF), and the ACR.

An American College of Gastroenterology (ACG) 2008 update to its colorectal cancer screening guideline, which was not currently included in the National Guideline Clearinghouse (NGC) database, was also summarized for the ACP guideline, but not formally evaluated (see the "Description of Methods Used to Analyze the Evidence" field).

Number of Source Documents

This guideline is adapted from 4 primary sources.

Methods Used to Assess the Quality and Strength of the Evidence

Not stated

Rating Scheme for the Strength of the Evidence

Not applicable

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Description of the Methods Used to Analyze the Evidence

The seven co-authors reviewed four of the guidelines independently by using the Appraisal of Guidelines for Research and Evaluation II (AGREE II) appraisal instrument, which asks 23 questions in 6 domains: scope and purpose, stakeholder involvement, rigor of development, clarity and presentation, applicability, and editorial independence. The authors selected one guideline to calibrate their scores on the 6 domains of the AGREE II instrument, scored each guideline independently, and then compared the scores. Although total quantitative scores varied somewhat, the qualitative assessment of guideline quality was consistent among the seven reviewers; indeed, the overall rankings of the quality of the guidelines were similar (see Table 1 in the full guideline document).

Of note, the American College of Gastroenterology (ACG) published a 2008 update to its colorectal cancer screening guideline, but this guideline is not currently included in the National Guideline Clearinghouse (NGC) database. Because many clinicians involved in decision making about colorectal cancer screening consult the ACG guidelines, the authors chose to summarize this guideline despite its absence from the NGC. However, they did not formally evaluate it by using the AGREE II instrument because their predefined methods were to rate guidelines available in the NGC. In addition, the ACG was a contributor to the joint ACS/USMSTF/ACR guideline.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

The Clinical Guidelines Committee of the American College of Physicians (ACP) developed this guidance statement for clinicians, according to methods published previously (see the "Availability of Companion Documents" field), by assessing current guidelines from other organizations on screening for colorectal cancer. When multiple guidelines are available on a topic or when existing guidelines conflict, ACP believes that providing

clinicians with a rigorous review of the available guidelines is more useful than developing a new guideline on the same topic.

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

The guideline was approved by the American College of Physicians (ACP) Board of Regents on 19 November 2011.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The guidance statements are derived from other organizations' guidelines and are based on an evaluation of strengths and limitations of the available guidelines (see the "Adaption" field for full citations).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Early detection and treatment of colorectal cancer

Potential Harms

Harms of endoscopic and radiologic screening tests include perforation and major bleeding with endoscopic tests and exposure to radiation with radiologic tests. Although few studies have evaluated the harms of stool-based tests, the probability of major harms is probably very small. False-positive and false-negative tests (leading to false reassurance) are also a concern.

See Figure 2 in the original guideline document for a list of harms of unnecessary screening.

Qualifying Statements

Qualifying Statements

- Clinical guidance statements are "guides" only and may not apply to all patients and all clinical situations. Thus, they are not intended to override clinicians' judgment.
- The authors of this article are responsible for its contents, including any clinical or treatment recommendations.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Mobile Device Resources

Patient Resources

Staff Training/Competency Material

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Timeliness

Identifying Information and Availability

Bibliographic Source(s)

Qaseem A, Denberg TD, Hopkins RH Jr, Humphrey LL, Levine J, Sweet DE, Shekelle P, Clinical Guidelines Committee of the American College of Physicians. Screening for colorectal cancer: a guidance statement from the American College of Physicians. Ann Intern Med. 2012 Mar 6;156(5):378-86. [16 references] PubMed

Adaptation

This guideline is adapted from the following primary sources:

- Levin B, Lieberman DA, McFarland B, Andrews KS, Brooks D, Bond J, et al; American Cancer Society Colorectal Cancer Advisory Group. Screening and surveillance for the early detection of colorectal cancer and adenomatous polyps, 2008: a joint guideline from the American Cancer Society, the US Multi-Society Task Force on Colorectal Cancer, and the American College of Radiology. Gastroenterology. 2008;134:1570-95.
- Institute for Clinical Systems Improvement. Health Care Guideline: Colorectal Cancer Screening. 2010. Accessed at www.icsi.org/colorectal_cancer-_screening/colorectal_cancer_screening_5.html on 1 September 2011.

- U.S. Preventive Services Task Force. Screening for colorectal cancer: U.S. Preventive Services Task Force recommendation statement. Ann Intern Med. 2008;149:627-37.
- Yee J, Rosen MP, Blake MA, Baker ME, Cash BD, Fidler JL, et al. ACR Appropriateness Criteria on colorectal cancer screening. J Am Coll Radiol. 2010; 7:670-8.

Date Released

2012 Mar 6

Guideline Developer(s)

American College of Physicians - Medical Specialty Society

Source(s) of Funding

American College of Physicians

Guideline Committee

Clinical Guidelines Committee of the American College of Physicians

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Financial Disclosures/Conflicts of Interest

Any financial and nonfinancial conflicts of interest of the group members were declared, discussed, and resolved. A record of conflicts of interest is kept for each Clinical Guidelines Committee meeting and conference call and can be viewed at www.acponline.org/clinical_information/guidelines/guidelines/conflicts_cgc.htm. Drs. Denberg, Hopkins, and Humphrey: *Support for travel to meetings for the study or other purposes*: ACP. Dr. Hopkins: *Board membership*: National Foundation for Infectious Diseases; *Consultancy*: Qualchoice of Arkansas, MedStudy Corporation; *Payment for lectures including service on speakers bureaus*: VEMCO MedEd Corp. Dr. Shekelle: *Consultancy*: ECRI; *Employment*: VA; *Grants/grants pending (money to institution)*: AHRQ, VA, CMS, NINR-NIH, DHHS; *Royalties*: UpToDate. Disclosures can be viewed at www.acponline.org/authors/icmje/ConflictOfInterestForms.do?msNum=M11-3122.

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available from the Annals of Internal Medicine Web site.

Print copies: Available from the American College of Physicians (ACP), 190 N. Independence Mall West, Philadelphia PA 19106-1572.

Availability of Companion Documents

The following are available:

- Qaseem A, Snow V, Owens DK, Shekelle P. The development of clinical practice guidelines and guidance statements of the American College of Physicians: summary of methods. Ann Intern Med. 2010 Aug 3;153(3):194-199. Electronic copies: Available from the Annals of Internal Medicine Web site .
- Recommendations for colorectal cancer screening. Continuing Medical Education. Available from the Annals of Internal Medicine Web site .

Print copies: Available from the American College of Physicians (ACP), 190 N. Independence Mall West, Philadelphia PA 19106-1572.

A collection of Recommendation Summaries for all current American College of Physicians (ACP) Clinical Guidelines is now available for mobile devices from the ACP Web site .

Patient Resources

The following is available:

- Summaries for patients. Screening for colorectal cancer: a guidance statement from the American College of Physicians. Electronic copies: Available from the Annals of Internal Medicine Web site .

Print copies: Available from the American College of Physicians (ACP), 190 N. Independence Mall West, Philadelphia PA 19106-1572.

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NGC Status

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